

1.0 Connecting OpenGN to a PRO-2000

Attention: Before you begin, follow the instructions in LT-1113 "OpenGN Administrator's Guide" (available on http://www.mircom.com) to install OpenGN and configure the computer running OpenGN and the OpenGN Gateway.

Note: These instructions should be completed by someone familiar with configuring a PRO-2000. See LT-1012, the PRO-2000 Installation and Operation Manual (available on http://www.mircom.com).

You need:

- ARW-VESP211 Advantech Serial to Ethernet Converter
- Advantech software CD
- RJ-11 to DB9 adapter (part of the PRO-2000 kit)
- RJ-11 cable (part of the PRO-2000 kit)
- Ethernet cable (maximum 300')
- OpenGN version 3.4 or later
- OpenGN Gateway version 3.4 or later
- OpenGN license key
- PRO-2000 with firmware 5.14 or later
- PRO-2000_XML_Generator software
- FIRE-SCOPE PRO-2000 System Configurator

1.1 Overview

To connect OpenGN to a PRO-2000, you must:

- 1. Configure the PRO-2000
- 2. Generate the VDU File
- 3. Convert the VDU File to XML
- 4. Connect the PRO-2000 to the OpenGN Gateway with the ARW-VESP211
- 5. Set the PRO-2000 to Communicate using Modbus
- 6. Configure the ARW-VESP211
- 7. Set up the VCOM Driver
- 8. Import the XML file into OpenGN
- 9. Configure the OpenGN Gateway

Follow the instructions below to complete these steps.



1.2 Configure the PRO-2000

- 1. Connect the PRO-2000 to the computer and configure it with the PRO-2000 System Configurator.
- 2. In the Network tab of the Configurator, provide the following information.

Baud Rate	9600
PC/PLC	Select this option.
Dest. Address	Any number between 11 and 255.

Fire-Scope® PRO-2000 Series - Eile Panel Iools Options Provide Provide	- Nov13r23.xls
Nodes/Zones Ne	twork Ceneral Communation RS422 ⓒ Stub Baud Rate ⓒ Loop 19200 ▼ Stub1 ⓒ Network ⓒ LCD ⓒ None
Stub3 RS232 Baud Rate 9600 Dest. Adress 12 C None	Stub2 C Network C LCD © None [16/11/2015 9:32 AM

Figure 1 Network Tab of the Configurator

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Note: Make a note of the Dest. Address. You will need it in a later step.

- 3. In the General tab of the Configurator, click Generate Modbus Address.
- 4. Make a note of the number beside MODBUS maximum register.

PRO2000	
Minimun value for the MODBUS b Minimun value for the MODBUS n Need to set these values in genera	naximun register = 96 !
	ОК

Figure 2 Modbus Maximum Register

5. Click **OK**.



6. Enter the number from step 4 in the MODBUS Max Reg field.

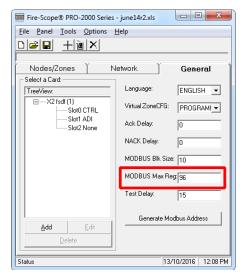


Figure 3 General tab

7. Send the configuration file to the panel.

1.3 Generate the VDU File

1. In the PRO-2000 Configurator, select Tools, then select Generate VDU Generic File.

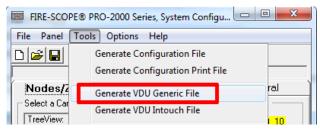


Figure 4 Generate VDU Generic File

The VDU file is saved in the same directory as your other configuration files. It is named **VDU_gen.csv**.



1.4 Convert the VDU File to XML

- 1. Copy the VDU file into the same folder as the **PRO-2000_XML_Generator** software.
- 2. Right-click the **PRO-2000_XML_Generator** icon, and then click **Run as Administrator**.
- 3. In the PRO-2000 XML Generator window that appears, provide the following information:

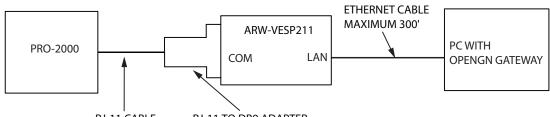
File Name	Enter a name for the XML file, or press Enter to use the job name that was set in the PRO-2000 Configurator.			
	If the file already exists, the PRO-2000 XML Generator appends the date and time to the new file name.			
Job ID Number	Enter a Job ID Number or press Enter to generate one automatically.			
	If you are creating a new version of an existing job, use the same Job ID Number.			
Job Version	Enter a Job Version number or press Enter to generate one automatically.			
Job Name	Enter a Job Name or press Enter to use the job name that was set in the PRO-2000 Configurator.			
Modbus Dest. Address	Enter the number that you entered for Dest. Address in the Network tab of the PRO-2000 Configurator (section 1.2 on page 2).			
	Note: Keep a record of this number. You will need it in a later step.			

- 4. Wait for the process to complete.
- 5. When the process is complete, press any key to continue.
- 6. Open the file **Job_Details.csv** and make a note of the numbers in the **JobID** and **JobVersion** columns. You will need these in a later step.
- **Note:** Each time that you run the PRO-2000 XML Generator, it creates a new XML file and updates the **Job_Details.csv** file with the name of the XML file, the Job ID Number, and Job Version associated with that XML file.



1.5 Connect the PRO-2000 to the OpenGN Gateway with the ARW-VESP211

- 1. Connect the RJ-11 to DB9 adapter to the COM port on the ARW-VESP211.
- 2. Connect the RJ-11 cable to the same port on the PRO-2000 that you use for configuring the PRO-2000.
- 3. Connect the other end of the RJ-11 cable to the RJ-11 to DB9 adapter.
- 4. Use an Ethernet cable to connect the LAN port on the ARW-VESP211 to the computer running the OpenGN Gateway.
- 5. Connect the ARW-VESP211 to the power.



RJ-11 CABLE RJ-11 TO DB9 ADAPTER



1.6 Set the PRO-2000 to Communicate using Modbus

On the PRO-2000 panel that is connected to the ARW-VESP211, set the rotary switch SW1 to 3.

1.7 Configure the ARW-VESP211

1.7.1 Configure the OpenGN Gateway Computer to Connect to the ARW-VESP211

In order to initially connect to the ARW-VESP211, the OpenGN Gateway computer must have a specific IP address.

- 1. On the computer that the OpenGN Gateway is on, click **Start**, then click **Settings**.
- 2. Click Network and Internet.
- 3. Click Network and Sharing Center.
- 4. Click the Ethernet connection.



Ethernet State	JS		>
General			
Connection —			_
IPv4 Connec	ivity:	Internet	
IPv6 Connec	ivity:	No network access	
Media State:		Enabled	
Duration:		5 days 02:13:52	
Speed:		1.0 Gbps	
D <u>e</u> tails			
Activity ——			
	Sent —	Received	
Bytes:	57,600,226,918	2,679,045,235	
		Diagrage	
Properties	₽ Disable	Diagnose	

The Ethernet Status window appears.

Figure 6 Ethernet Status

5. Click **Properties**.

The Ethernet Properties window appears.

Ethernet Properties	×
Networking	
Connect using:	
Intel(R) 82578DM Gigabit Network Connection	
<u>C</u> onfigure	
This connection uses the following items:	
	~
Install Uninstall Properties	
Description Allows your computer to access resources on a Microsoft network.	
OK Cano	el

Figure 7 Ethernet Properties

6. Double-click Internet Protocol Version 4 (TCP/IPv4).



ternet Protocol Version 4 (TCP/IPv	4) Prope	rties			×
General					
You can get IP settings assigned aut this capability. Otherwise, you need for the appropriate IP settings.					
O Obtain an IP address automatic	ally				
Use the following IP address:					
IP address:					
Subnet mask:					
Default gateway:					
Obtain DNS server address aut	omatically				
• Use the following DNS server a	ddresses:				
Preferred DNS server:					
Alternate DNS server:					
Validate settings upon exit			Ad <u>v</u> a	inced	

The Internet Protocol Version 4 (TCP/IPv4) Properties window appears.

Figure 8 Internet Protocol Version 4 (TCP/IPv4) Properties

- 7. Click Use the following IP address.
- 8. Type the following addresses:
 - IP address: 169.254.102.40
 - Subnet mask: 255.255.0.0
- 6. Click OK.

1.7.2 Install the Vlinx Serial Server Manager

1. Insert the Advantech CD into the OpenGN Gateway computer.

The Vlinx Serial Server Manager Installation Wizard starts automatically.



Figure 9 Welcome to the Vlinx Serial Server Manager Installation Wizard

2. Follow the instructions on the screen to install the Vlinx Serial Server Manager.



1.7.3 Configure the ARW-VESP211

1. On the OpenGN Gateway computer, open the Serial Server Manager: click **Start > B&B Electronics > Vlinx > Vlinx Serial Server Manager**.

The Vlinx Serial Server Manager appears.



Figure 10 Advantech Monitor Application

- 2. Click I don't know the IP address of the device.
- 3. Click Connect.

The Vlinx Serial Server Manager looks for devices.



Figure 11 Advantech Device Details

The Login screen for the ARW-VESP211 device appears.

Vilnx Senal Server Manager 17.0		
Open Cfg Save Cfg Server Search Fir	19	
00:0E:BE:0C:11:69 VESP211-000EB	0C1169 169.254.102.39 TCP:S:4000	
		VESP211-000
Ethernet Serial	Server	
Contents	Login	
	Password	
	Login	
	Modet VESP211 10.0 Franzer Variane, 110.0 MAC Address 000EEDC01169 Link Sumn: 100BaseTX fild daplex	
	Deer Crg See Crg Server Search Fin Which device do you want to configure 2 On MAC Addees Server Name 00 0E IEE OC.1169 VESP211-000EBI VESP211-000EBI Configure 2 On Configure 2 On Ethernet Serial S	Proc S Sector Sect

Figure 12 Login screen



4. Enter the Login password, then click **Login**. By default, the password is blank.

The General screen appears.

Vinx Serial Server Manager 1.7.0		
Open Cfg Save Cfg Server Search	Firmware Upgrade Add VCOM Remove VCOM Diagnostic	
Which device do you want to configure? MAC Address Server Na	Choose the device by double-clicking on one of the devices in the list below. Internation Pot 1	
00:0E:8E:0C:11:69 VESP211-000	EBE0C1169 169.254.102.39 TCP:S-4000	
	X	VESP211-000
Ethernet Seria	il Server	
Contents	General	
General Network	The name of this serial server is: VESP211-000EBE0C1169	
Port 1 Settings Port 1 Serial	☑ I want to change the password.	
Logout	Type the new password:	
	Type the new password again to confirm it	
	Save Next	
11		1

Figure 13 General screen

- 5. Enter a name that describes the panel that the device is connecting to, for instance **PRO-2000**.
- 6. Select I want to change the password, then enter the new password.
- 7. Click Save.



Note: Keep a record of the password. You will need it in a later step.

8. Click **Network** on the left sidebar.

The Network screen appears.



Figure 14 Network screen

9. Enter the following information:

IP address Subnet Mask Default Gateway	Consult your network administrator for assistance. The IP address must be in the same range as the IP address of the computer running the OpenGN Gateway. The gateway and subnet mask must be the same as they are on the OpenGN Gateway computer.
	For example, if the OpenGN Gateway computer's IP address and subnet mask are 192.168.1.10 and 255.255.255.0, then you can enter 192.168.1.11 and 255.255.255.0 as the ARW-VESP211's IP address and subnet mask.



Note: Keep a record of the IP address. You will need it in a later step.

To ensure a constant connection to OpenGN, you must assign a static IP address to the ARW-VESP211.

10. Click Next.

The Port 1 Settings screen appears.



Figure 15 Port 1 Settings

- 11. Select VCOM Mode.
- 12. Click Next.

The Port 1 Serial screen appears.

Vino Seriel Series Manager 2.10 Port Seriel Series Manager 2.10 Port Series Constraints Upgase Add VCMM Remove VCMM Diagnostic Vihich dense by you satt to configure 70 Doose the dense by dense in the list below. Mich Adees Serre Man Correction Fort					
00.0E:BE:0C:11:69 VESP211-000E	00.0E.8E.0C.11.89 VESP211-0000EEECT119 169.254.102.39 TCP-5-4000				
	X				
Contents	Server Port 1 - Serial				
	Port 1 - Serial				
General Network	Description:	Serial Port 1			
Port 1 Settings Port 1 Serial	Mode:	RS-232 🔽			
Logout	Baud Rate:	9600 V			
- Longoon	Data Bits:	6-Bas 🗸			
	Stop Bits:	1-Bit V			
	Parity:	No Panty V			
	Flow Control:	No Flow Control 🗸			
	Save Back Nex	a			

Figure 16 Port 1 Serial

- 13. Select **RS-232** in the Mode menu.
- 14. Click Next.
- 15. Under Save, click the Save button and wait for the Login screen to appear.

1.7.4 Configure the OpenGN Gateway Computer

• Change the IP settings for the OpenGN Gateway computer to their previous values. See section 1.7.1 on page 5 for instructions on how to change the IP settings.

If you need assistance, contact your network administrator.

If you are connecting the OpenGN Gateway computer to a PRO-2000 panel directly over Ethernet, enter an IP address that is different than the IP address of the PRO-2000 panel. Enter the same subnet mask as the subnet mask on the panel.



1.8 Set up the VCOM Driver

1. On the Login screen, click Add VCOM.

Vlinx Serial Server Manager 1.7.0	
Onen Cfo, Save Cfo, Server Search, Fi	β ⁰ A → ^α ^μ ^μ max-Upgrade AVCOM Renore VCOM Disposit:
	the set of
MAC Address Server Name	Connection Post
00:0E:BE:0C:11:69 PRO-2000	128.15.1.128 VCOM
Ethernet Serial	Server
Lunemet Senar	
Contents	Login
	Password
	Login
	Model: VESP211 Firmware Version: 1.10.0 Hardware Version: 1 MAC.Address: 00.0fb/EBE.0C:11.69 Liak Status: 100BnseTX full daplex

Figure 17 Add VCOM button

2. The Add VCOM window appears.

I want to use serial server: VESP211-000EBE0(and map serial port number: 1 v to the local computer as: COM18 v	The information about the serial port is Server Name: MESP211- 000EBE0C1169 IP Address: 169 254.102.39 Mode: TCP Server TCP Port: 4000
	Add Close

Figure 18 Add VCOM

3. Enter the following information:

I want to use a serial server:	Select the configured ARW-VESP211 Serial Server.
and map serial port number:	Select 1.
to the local computer as:	Select a COM port number.

1

Note: Keep a record of the COM port number. You will need it in a later step.

4. Click Add.

A Success message should appear.

- 5. If there is an error
 - a. Make sure the ARW-VESP211 is connected to the Ethernet cable.
 - b. Try a different COM port number when adding the VCOM.



1.9 Import the XML file into OpenGN

- 1. Transfer the XML file you generated in section 1.4 on page 4 to the computer that OpenGN is running on.
- 2. Insert the OpenGN CodeMeter license key in the computer.
- 3. Double-click the Open Graphic Navigator icon.

The Login window appears.

Login :	Admin	
Password :		
	OK Cancel	
Ente	r your login and Password.	

Figure 19 Login Window

- 4. Select the user from the **Login** menu.
- 5. Type the password.
- 6. Click OK.

The OpenGN Main Display window appears.

- 7. Click the **Config** button from the Main Display window.
- Click **Yes** to confirm that you want to enter the configuration section. The Configuration window appears.
- Click the Settings button in the lower right-hand corner of the Configuration window. The Panel Settings window appears.

Panel Settings	Panel	
Campus Settings	Select Panel:	Delete
Display Settings	r Panel Details	
Icon Settings	Panel Guid: -	
Object Type Settings	Version Guid: -	
Event Log Settings	Manufacturer: -	
	Description: -	
Email Notification Settings	Model: -	
Database Settings	Panel URL: -	
Connection Settings	Job Type: - Filename: -	
Users Settings		
	Panel Configuration	
	Import XML:	Browse
	Auto-associate default icons	
		Import

Figure 20 Panel Settings

10. Click Browse in the Panel Configuration section, and then navigate to the XML file.



11. Select **Auto-associate default icons** if you want to associate the object icons with the existing system icon images.

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- **Note:** If you are importing a new version of a previously imported job file, uncheck **Auto-associate default icons**. Otherwise, any custom icon settings you have made will be erased.
- 12. Click Import XML.
- 13. Click Yes.
- 14. Restart OpenGN.

1.10 Configure the OpenGN Gateway

1. Double-click the **Open Graphic Navigator Gateway** icon.

OPEN GRAPHIC NAVIGATOR OpenGN Gatev	///////. vay v1.0.2	MIRCOM
Select Interface: Local Area Connection	•	
Adapter List		
Source Type Ource Connection Command P	Command Port	+ / ×
opricit (C) 2012-2014		Au

Figure 21 OpenGN Gateway

2. Click the + button. 🕂



The Adapter Configuration window appears.

Figure 22 Adapter Configuration Window

3. Enter the following information.

1.8 on page 11).

Туре	PRO-2000 Series				
Connection String	The connection string consists of 8 pieces of information separated by colons. Change this string based on the information below:				
COM1: <node_number>:<jobidhere>:<job_version>:21,35000:100:20:30000</job_version></jobidhere></node_number>					
A : B	: C : D : E,F : G : H: I				
• A: The virtual COM port number from the VCOM driver (assigned in section					

- **B**: The **Dest. Address** from the Network tab of the PRO-2000 Configurator (assigned in section 1.2 on page 2).
- C: The Job ID Number (assigned in section 1.4 on page 4).
- D: The Job Version (assigned in section 1.4 on page 4).
- E: Starting Modbus address. Leave as is.
- **F**: Modbus maximum register number from the General tab of the PRO-2000 Configurator (assigned in section 1.2 on page 2).

Note: Items **E** and **F** (the starting and ending Modbus addresses) must be separated by a comma.

- G: Number of addresses polled per read. Leave at 100.
- H: Delay between read messages (in milliseconds). Leave at 20.
- I: Delay to wait when No Response received (in milliseconds). Leave at 3000.



4. Click the green button 🖶 beside Destination, and then provide the following information:

Destination IP	The IP address of the OpenGN computer. If the OpenGN Gateway and OpenGN are on the same computer, use 127.0.0.1.
Destination Port	1209
Store and Forward Events	Reserved for future use.

5. Click OK.

Destination				Add/Edit Destination		
Destination IP	Destination Port	itore And Forward		,		
				Destination IP:	127.001	
			/	Destination Port:	1209_	
			×	Store And Forward	Events:	
•	III	Þ			OK Cancel	

Figure 23 Destination

- 6. Click **Auto Start Adapter When OpenGN Gateway Starts** if you want the OpenGN Gateway to connect automatically with these settings when it starts.
- 7. Click Save.
- 8. Click Close.
- Select the adapter you created, and then click the green arrow icon:
 When OpenGN is connected, the adapter in the Adapter List is green.

	Ope	nGN G	ateway	V1.0.2		
Select Inter	face: Local Area	Connection		•		
dapter List						
	ource Connection			Command Port		
PRO-2000 Ser	ies 10.10.8.195:140	10.10.8.201	1310			
						j)
						<u></u>
						X
						ALL

Figure 24 OpenGN Gateway with One Connection

10. Double-click the adapter to view its details.



When OpenGN is connected, the icon beside **Connection String** turns from red to green, and the Destination turns green.

Source			
Type:	Connection String:		_
PRO-2000 Series	COM1:11:26EAC47ADF8	F83FD02AF4	54F991478CC:74EABC
Destination Destination IP Destination Port store A	nd Eorw	dit Destination	127.0.0.1
1 127.0.0.1 1209 No		nation Port:	Green
Gree	•	And Forward	Events: Cancel
Command Connection	Incoming Command IP:		Port:
	127.0.0.1		1309
Optional Configuration Auto Start Adapter When XML Adapter starts.			
Command Button Stop Clear			Save

Figure 25 The OpenGN Gateway Showing a Connection

11. Start OpenGN.



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